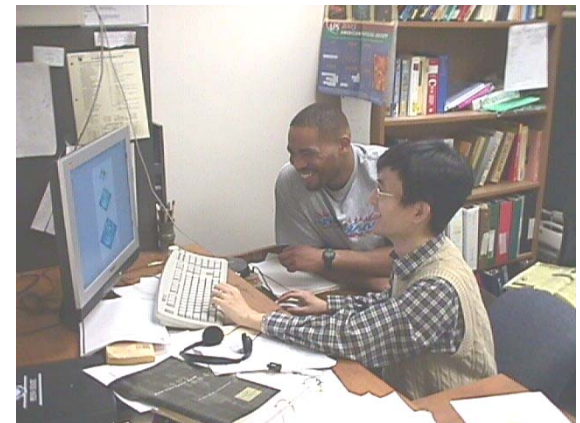# Theory of composite fermions

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All particles in nature can be classified as bosons or fermions. However, the beauty of condensed matter systems is that there is no fundamental principle of physics that precludes the possibility that some emergent quasiparticles may obey unconventional statistics. Particles that are neither bosons nor fermions are called "anyons." It has been suspected for some time that the excitations of fractional Hall systems constitute an example of anyons. Gun Sang Jeon and Kenneth Graham have used the composite fermion theory to explicitly demonstrate, in a microscopic calculation, that these excitations do indeed satisfy "weird" statistics. It remains to be seen how this remarkable property can be measured experimentally.
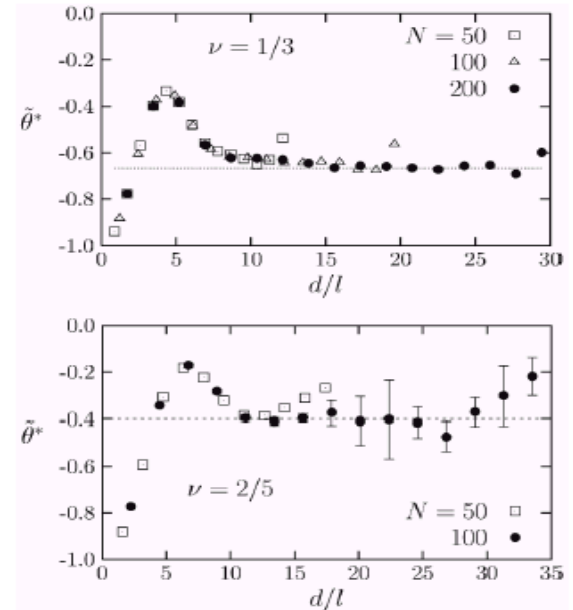
Calculated statistical angle

Graham and Jeon